

Appl. No. 09/265,073
Preliminary Amendment

In the Claims

1. [Previously Presented] A wireless communication system comprising:

an interrogator including:

a housing including circuitry configured to generate a forward link communication signal;

communication circuitry configured to communicate the forward link communication signal; and

a communication station remotely located with respect to the housing and configured to receive the forward link communication signal from the communication circuitry and to radiate a forward link wireless signal corresponding to the forward link communication signal;

a remote communication device configured to receive the forward link wireless signal; and

wherein the circuitry of the housing comprises a transmitter configured to generate the forward link communication signal comprising a modulated signal.

2. [Previously Presented] The wireless communication system according to claim 1 further comprising a driver amplifier coupled with the circuitry of the housing and configured to increase the power of the forward link communication signal and to apply the forward link communication signal to an input of the communication circuitry.

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3. [Original] The wireless communication system according to claim 1 wherein the communication station includes adjustment circuitry configured to receive the forward link communication signal from the communication circuitry and to adjust an electrical characteristic of the forward link communication signal.

4. [Original] The wireless communication system according to claim 3 wherein the adjustment circuitry comprises automatic gain control circuitry.

5. [Original] The wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to monitor the power of the forward link communication signal and adjust the power of the forward link communication signal responsive to the monitoring.

6. [Original] The wireless communication system according to claim 1 wherein the communication station includes a power amplifier configured to receive the forward link communication signal from the communication circuitry and to amplify the forward link communication signal.

7. [Original] The wireless communication system according to claim 6 wherein the communication station includes an antenna configured to receive the forward link communication signal from the power amplifier and to radiate the forward link wireless signal.

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8. [Original] The wireless communication system according to claim 1 wherein the remote communication device includes a radio frequency identification device.

9. [Original] The wireless communication system according to claim 1 wherein the communication circuitry includes a coaxial RF cable.

10. [Original] The wireless communication system according to claim 1 wherein the communication circuitry includes a plurality of transceivers individually coupled with one of the housing and the communication station.

11. [Previously Presented] An interrogator of a wireless communication system comprising:

a housing including circuitry configured to generate a forward link communication signal;

communication circuitry outside of the housing and coupled with the circuitry of the housing and configured to communicate the forward link communication signal;

a communication station remotely located with respect to the housing and including an antenna coupled with the communication circuitry and configured to radiate a forward link wireless signal corresponding to the forward link communication signal; and

wherein the circuitry of the housing comprises a transmitter configured to generate the forward link communication signal comprising a modulated signal.

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12. [Previously Presented] The interrogator according to claim 11 further comprising a driver amplifier coupled with the circuitry of the housing and configured to increase the power of the forward link communication signal and to apply the forward link communication signal to an input of the communication circuitry.

13. [Original] The interrogator according to claim 11 wherein the communication station includes adjustment circuitry configured to receive the forward link communication signal from the communication circuitry and to adjust at least one electrical characteristic of the forward link communication signal.

14. [Original] The interrogator according to claim 11 wherein the adjustment circuitry comprises automatic gain control circuitry.

15. [Original] The interrogator according to claim 14 wherein the automatic gain control circuitry is configured to monitor the power of the forward link communication signal and adjust the power of the forward link communication signal responsive to the monitoring.

16. [Original] The interrogator according to claim 11 wherein the communication station includes a power amplifier configured to receive the forward link communication signal from the communication circuitry and to amplify the forward link communication signal.

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17. [Original] The interrogator according to claim 11 wherein the communication station includes an antenna configured to receive the forward link communication signal from the power amplifier and to radiate the forward link wireless signal.

18. [Original] The interrogator according to claim 11 wherein the remote communication device comprises a radio frequency identification device.

19. [Original] The interrogator according to claim 11 wherein the communication circuitry includes a coaxial RF cable.

20. [Previously Presented] The interrogator according to claim 11 wherein the communication circuitry includes a plurality of transceivers individually coupled with one of the housing and the communication station.

21. [Previously Presented] An interrogator of a wireless communication system comprising:

a housing including circuitry configured to generate a plurality of forward link communication signals;

a plurality of communication stations remotely located with respect to the housing and individually configured to receive at least one of the forward link communication signals from the housing and radiate a forward link wireless signal corresponding to the at least one forward link communication signal; and

wherein the circuitry of the housing is configured to generate the forward link

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communication signal comprising a modulated signal.

22. [Original] The interrogator according to claim 21 wherein the communication stations individually include adjustment circuitry configured to receive the at least one forward link communication signal and to adjust at least one electrical characteristic of the forward link communication signal.

23. [Original] The interrogator according to claim 22 wherein the adjustment circuitry includes automatic gain control circuitry.

24. [Original] The interrogator according to claim 21 further comprising a plurality of communication circuits individually configured to communicate at least one forward link communication signal intermediate the housing and one of the communication stations.

25. [Original] The interrogator according to claim 21 wherein the communication stations are individually positioned to radiate the forward link wireless signal within one of a plurality of communication ranges.

26. [Canceled].

27. [Previously Presented] A method of communicating within a wireless communication system comprising:

providing an interrogator and at least one remote communication device;

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generating a forward link communication signal using circuitry within a housing of the interrogator;

communicating the forward link communication signal from the housing using communication circuitry;

receiving the forward link communication signal from the communication circuitry within a communication station of the interrogator remotely located from the housing;

radiating a forward link wireless signal corresponding to the forward link communication signal using the communication station;

receiving the forward link wireless signal within the at least one remote communication device; and

wherein the generating comprises generating the forward link communication signal comprising a modulated signal using the circuitry within the housing.

28. [Original] The method according to claim 27 further comprising amplifying the forward link communication signal before the communicating.

29. [Original] The method according to claim 27 further comprising adjusting at least one electrical characteristic of the forward link communication signal before the radiating.

30. [Original] The method according to claim 29 wherein the adjusting comprises adjusting using automatic gain control circuitry.

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31. [Original] The method according to claim 29 wherein the adjusting includes:
monitoring the power of the forward link communication signal within the communication station; and
adjusting the power of the forward link communication signal responsive to the monitoring.

32. [Original] The method according to claim 31 wherein the monitoring includes:
adjusting a threshold value corresponding to a distance intermediate the housing and the communication station; and
comparing the power of the forward link communication signal received from the communication circuitry with the threshold value.

33. [Original] The method according to claim 27 further comprising amplifying the forward link communication signal within the communication station before the radiating.

34. [Original] The method according to claim 27 wherein the providing at least one remote communication device comprises providing a radio frequency identification device.

35. [Previously Presented] A method of communicating within a wireless communication system comprising:
providing an interrogator having a housing and at least one communication station remotely located from the housing;

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generating a forward link communication signal using circuitry within the housing;
communicating the forward link communication signal from the housing using communication circuitry;
receiving the forward link communication signal from the communication circuitry within the communication station;
radiating a forward link wireless signal corresponding to the forward link communication signal using the communication station; and
wherein the generating comprises generating the forward link communication signal comprising a modulated signal using the circuitry within the housing.

36. [Original] The method according to claim 35 further comprising amplifying the forward link communication signal before the communicating.

37. [Original] The method according to claim 35 further comprising adjusting at least one electrical characteristic of the forward link communication signal before the radiating.

38. [Original] The method according to claim 37 wherein the adjusting includes adjusting using automatic gain control circuitry.

39. [Original] The method according to claim 37 wherein the adjusting includes: monitoring the power of the forward link communication signal within the communication station; and

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adjusting the power of the forward link communication signal responsive to the monitoring.

40. [Original] The method according to claim 39 wherein the monitoring includes:
adjusting a threshold value corresponding to a distance intermediate the housing and the communication station; and

comparing the power of the forward link communication signal received from the communication circuitry with the threshold value.

41. [Original] The method according to claim 35 further comprising amplifying the forward link communication signal within the communication station before the radiating.

42. [Original] The method according to claim 35 wherein the providing comprises providing a plurality of communication stations remotely located from the housing, and the communication stations are individually positioned to transmit a forward link wireless signal within one of a plurality of communication ranges.

Claims 43-50 [canceled].

51. [Previously Presented] The wireless communication system according to claim 1 wherein the communication station is configured to convert the forward link communication signal comprising the modulated signal from a first communication medium type to a second communication medium type comprising a wireless medium and different

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than the first communication medium type.

52. [Previously Presented] The wireless communication system according to claim 51 wherein the first communication medium type comprises a wired medium.

53. [Previously Presented] The wireless communication system according to claim 1 wherein the communication circuitry comprises a wired medium configured to communicate the forward link communication signal comprising the modulated signal intermediate the housing and the communication station.

54. [Previously Presented] The wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to adjust the electrical characteristic of the forward link communication signal comprising the modulated signal which comprises a wired signal.

55. [Previously Presented] The method according to claim 35 wherein the radiating comprises converting the forward link communication signal comprising the modulated signal from a first communication medium type to a second communication medium type comprising a wireless medium and different than the first communication medium type.

56. [Previously Presented] The method according to claim 55 wherein the first communication medium type comprises a wired medium.

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57. [Previously Presented] The method according to claim 35 wherein the communicating comprises communicating the forward link communication signal comprising the modulated signal from the housing using a wired medium.

58. [Previously Presented] A communications method comprising:
generating a polling signal using circuitry of a source;
modulating the polling signal using a radio frequency transmitter of the source, the modulating providing a modulated polling signal of a first communication medium type;
first communicating the modulated polling signal of the first communication medium type externally of the source;
receiving the modulated polling signal of the first communication medium type within a communication station remotely located with respect to the source;
converting the modulated polling signal from the first communication medium type to a second communication medium type different than the first communication medium type using circuitry of the communication station; and
second communicating the modulated polling signal of the second communication medium type to a transponder remotely located with respect to the source and the communication station.

59. [Previously Presented] The method of claim 58 wherein the first and the second communicating comprise communicating using different communications media.

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60. [Previously Presented] The method of claim 59 wherein the communications media comprise a wire and electromagnetic energy for communicating respective ones of the polling signals of the first and the second communication medium types.

61. [Previously Presented] The method of claim 58 wherein the source comprises a housing and the first communicating comprises communicating externally of the housing.

62. [Previously Presented] The method of claim 58 wherein the modulating comprises RF modulating.

63. [Previously Presented] The method of claim 62 wherein the modulating comprises modulating a carrier signal using a data signal configured to implement polling of the transponder.

64. [Previously Presented] The wireless communication system according to claim 1 wherein the forward link communication signal generated by the circuitry of the housing comprises data including a command.

65. [Previously Presented] The method according to claim 27 wherein the generating the forward link communication signal comprises generating the signal comprising data including a command.

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66. [Previously Presented] The method of claim 58 wherein the second communicating comprises communicating using the communications station.

67. [New] The method of claim 58 wherein the first and the second communicating comprise communicating using a wire and electromagnetic energy for communicating respective ones of the polling signals of the first and the second communication medium types, and wherein the modulating comprises RF modulating.